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Application No: 10/718,981      Docket No.: Q175-US1

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IN THE CLAIMS

Please amend the claims as follows:

1. (previously presented) A primary battery, comprising:  
a cathode;  
an anode having a first medium including a first active material and a second medium having a concentration gradient of a second active material; and  
an electrolytic solution in contact with the cathode and the anode.
2. (previously presented) The battery of claim 1, wherein the first medium is positioned so as to protect at least a portion of the second medium from the electrolytic solution, the first medium being configured to dissipate during discharge of the battery enough to expose one or more of the protected regions of the second medium to the electrolytic solution.
3. (previously presented) The battery of claim 1, wherein the first medium is positioned so as to protect at least a portion of the second medium from the electrolytic solution, the first medium being positioned such that the concentration of the second active material decreases in a direction moving away from the first medium.
4. (canceled)
5. (previously presented) The battery of claim 1, wherein a chemical composition of the first active material includes a component in common with a chemical composition of the second active material
6. (previously presented) The battery of claim 5, wherein an ion of the common component is present in the electrolytic solution.
7. (previously presented) The battery of claim 5, wherein the cathode excludes the common component before discharge of the battery.
8. (previously presented) The battery of claim 5, wherein the first active material consists of

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the common component.

9. (previously presented) The battery of claim 8, wherein the common component is lithium.

10. (previously presented) The battery of claim 1, wherein the first active material and the second active material are selected such that the second active material can be generated by exposing the first active material and a second active material precursor to an electrolytic solution.

11. (previously presented) The battery of claim 1, wherein the first active material includes lithium and the second active material includes lithium, silicon, and oxygen.

12. (previously presented) The battery of claim 1, wherein the cathode includes one or more components selected from the group consisting of  $\text{CF}_x$ ,  $\text{MnO}_2$ , silver vanadium oxide (SVO),  $\text{SOCl}_2$  and  $\text{SO}_2\text{Cl}_2$ .

13. (previously presented) The battery of claim 1, wherein the cathode includes  $\text{CF}_x$ .

14. (previously presented) The battery of claim 1, wherein the electrolytic solution includes one or more components serving as a secondary reactant in a secondary reaction including as a reactant the secondary reactant and a product of one or more primary reactions, the one or more primary reactions occur at an electrode during discharge of the battery prior to the secondary reaction.

15. (previously presented) The battery of claim 14, wherein the electrolytic solution includes one or more components selected from the group consisting of lithium bis(oxalato)borate, lithium cyclopentadiene, lithium tetramethylcyclopentadiene, vinyl sulfolane, and carbon disulfide.

16. (previously presented) The battery of claim 14, wherein the electrolytic solution

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includes lithium bis(oxalato)borate.

17. (previously presented) The battery of claim 14, wherein the anode, cathode and electrolytic solution are selected to produce a voltage discharge profile having a capacity approximation section with a slope in a range of  $-3.0\%/%$  to  $-0.3\%/%$  for a depth of discharge duration of at least 15%.

18. (previously presented) The battery of claim 14, wherein the anode, cathode and electrolytic solution are selected to produce a voltage discharge profile having a plateau before the capacity approximation section, the plateau having a slope in a range of  $-0.3\%/%$  to  $0.3\%/%$  for a depth of discharge duration of at least 15%.

19. (currently amended) A primary battery, comprising:

a cathode;

an anode having a first medium including first active material and a second medium including a second active material, a chemical composition of the first active material having a component in common with a chemical composition of the second active material,

the first active medium contacting the second active medium, the first active medium including lithium metal and the second active including SiO and the second active material including LiSiO; and

an electrolytic solution in contact with the anode and the cathode.

20. (previously presented) The battery of claim 19, wherein the first active material is present in an amount that would cause the first active material to be depleted if the first active material were the only active material in the anode.

21. (previously presented) The battery of claim 19, wherein an ion of the common component is present in the electrolytic solution.

22. (previously presented) The battery of claim 19, wherein the first active material and the

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second active material are selected such that the second active material can be generated by exposing the first active material and a second active material precursor to an electrolytic solution.

23. (previously presented) The battery of claim 19, wherein the first active material consists of the common component.

24. (canceled)

25. (previously presented) The battery of claim 19, wherein the first active material includes lithium and the second active material includes lithium, silicon, and oxygen.

26. (previously presented) The battery of claim 19, wherein the cathode excludes the common component before discharge of the battery.

27. (previously presented) The battery of claim 19, wherein the cathode includes one or more components selected from the group consisting of  $\text{CF}_x$ ,  $\text{MnO}_2$ , silver vanadium oxide (SVO),  $\text{SOCl}_2$ , and  $\text{SO}_2\text{Cl}_2$ .

28. (previously presented) The battery of claim 19, wherein the cathode includes  $\text{CF}_x$ .

29. (previously presented) The battery of claim 19, wherein the electrolytic solution includes one or more components serving as a secondary reactant in a secondary reaction including as a reactant the secondary reactant and a product of one or more primary reactions, the one or more primary reactions occur at an electrode during discharge of the battery prior to the secondary reaction.

30. (previously presented) The battery of claim 29, wherein the electrolytic solution includes one or more components selected from the group consisting of lithium bis(oxalato)borate, lithium cyclopentadiene, lithium tetramethylcyclopentadiene, vinyl sulfolane, and carbon disulfide.

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31. (previously presented) The battery of claim 29, wherein the electrolytic solution includes lithium bis(oxalato)borate.
32. (previously presented) The battery of claim 19, wherein the anode, cathode and electrolytic solution are selected to produce a voltage discharge profile having a capacity approximation section with a slope in a range of  $-3.0\%/%$  to  $-0.3\%/%$  for a depth of discharge duration of at least 15%.
33. (previously presented) The battery of claim 19, wherein the anode, cathode and electrolytic solution are selected to produce a voltage discharge profile having a plateau before the capacity approximation section, the plateau having a slope in a range of  $-0.3\%/%$  to  $0.3\%/%$  for a depth of discharge duration of at least 15%.
34. (previously presented) A primary battery, comprising:  
an electrolytic solution contacting a cathode and an anode, the electrolytic solution, the anode and cathode selected to produce a voltage discharge profile with a capacity approximation section (CAS) having a slope continuously in a range of  $-3.0\%/%$  to  $-0.3\%/%$  for a depth of discharge duration of at least 15%, wherein said CAS is immediately preceded by a plateau with a slope continuously in a range of  $-0.3\%/%$  to  $0.3\%/%$  for a discharge duration of at least 15%.
35. (previously presented) The battery of claim 34, wherein the anode includes a first active material and a second active material.
36. (previously presented) The battery of claim 34, wherein a chemical composition of the first active material and a chemical composition of the second active material include at least one common component.
37. (previously presented) The battery of claim 34, wherein the anode includes a first medium having a first active material and a second medium having a second active material.

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38. (previously presented) The battery of claim 34, wherein the plateau has a slope that is continuously in a range of  $-0.3\%/%$  to  $0.3\%/%$  for a discharge duration of at least 50%.

39. (previously presented) The battery of claim 34, wherein the capacity approximation section has a slope that is continuously in a range of  $-2.5\%/%$  to  $-0.3\%/%$  for a discharge duration of at least 15%.

40. (previously presented) The battery of claim 34, wherein the voltage discharge profile does not exhibit an inflection point before dropping off at end-of-life.

41. (previously presented) A primary battery, comprising:  
an electrolytic solution contacting a cathode and an anode having a first medium including a first active material and a second medium having a second active material, the electrolytic solution, the anode and cathode are selected to produce a voltage discharge profile with a capacity approximation section (CAS) having a slope continuously in a range of  $-3.0\%/%$  to  $-0.3\%/%$  for a discharge duration of at least 15%.

42. (previously presented) The battery of claim 41, wherein the capacity approximation section has a slope continuously in a range of  $-2.5\%/%$  to  $-0.3\%/%$  for a discharge duration of at least 15%.

43. (previously presented) The battery of claim 41, wherein the capacity approximation section has a slope continuously in a range of  $-3.0\%/%$  to  $-0.3\%/%$  for a discharge duration of at least 20%.

44. (previously presented) The battery of claim 41, wherein the capacity approximation section has a slope continuously in a range of  $-2.5\%/%$  to  $-0.3\%/%$  for a discharge duration of at least 20%.

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45. (previously presented) The battery of claim 41, wherein a chemical composition of the first active material and a chemical composition of the second active material include at least one common component.

46. (previously presented) The battery of claim 41, wherein the voltage discharge profile has a plateau preceding said CAS with a slope continuously in a range of -0.3%/ to 0.3%/ for a discharge duration of at least 15%.

47. (previously presented) The battery of claim 41, wherein the voltage discharge profile has a plateau preceding said CAS with a slope continuously in a range of -0.3%/ to 0.3%/ for a discharge duration of at least 50%.

48.-73. (canceled)

74. (new) The battery of claim 11, wherein the second active material is  $\text{LiSiO}$ .

75. (new) The battery of claim 74, wherein the second medium includes  $\text{SiO}$ .